

**ADDENDUM NO. 2
TO
CONTRACT DOCUMENTS
FOR
655 COOK AVENUE**

DATE: November 1, 2013

OWNER: The Housing and Redevelopment Authority of Saint Paul, Minnesota
25 West Fourth Street, Saint Paul, MN 55102, Suite 1100
Marty McCarthy – Project Manager
(651) 266- 6552
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CONSTRUCTION

MANAGER: Neighborhood Development Alliance, Inc. (NeDA)
481 Wabasha Street
Saint Paul, MN 55107
Gail Merriam, Project Construction Manager
651.292.0131
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SCOPE

WRITER: Lunning Wende Associates
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Saint Paul, MN 55101
Scott Wende
651.221.0915
scott@lunningwende.com

The additions, omissions, corrections and clarifications contained in this Addendum shall be included as a part of the Contract Documents as provided for under the General Conditions of the Contract.

This Addendum is a Contract Document and may apply to any or all contracts and sub-contracts. Unless otherwise specified herein, all work required by this Addendum shall be in complete accord with the Contract Documents and subsequent Addendum thereto.

Prior Approvals: The below listed manufacturers of materials, equipment or systems are acceptable in name only and shall be subject to final approval of the specific product as to satisfying all requirements of the contract documents. The cost of any changes in the work of all trades as a result of substitutions shall be borne by the contractor making the substitutions.

This Addendum shall become part of the bid. The bidder shall insert the Addendum number in the space where indicated on the Bid Form. Failure to comply may result in the bid being rejected.

ARCHITECTURAL, STRUCTURAL AND SITE SPECIFICATION REVISIONS:

This document has been assembled to aid Contractors in preparing their bids for this Project. The present condition of the property is one of mid-construction. Assessment has been taken of the work completed and recommendations are made as to; acceptance of the Work, unfinished Work, rejection of the Work, and Work to be completed. Photographs have been included, in each specification section where appropriate, to provide additional clarification.

BIDDING AND CONTRACT REQUIREMENTS

Bids Issued:	November 14, 2013
Mandatory Pre-Bid Site Tour:	Thursday, November 21, 2013; 11:00 am - 12:30 pm
Bid Due Date on or Before:	Friday, December 5, 2013 at 2:00 pm
Bid Delivery Location:	The offices of the Housing and Redevelopment Authority of Saint Paul, MN Address: 25 West Fourth Street, Saint Paul, MN, Suite 1100
Public Bid Opening and Location:	Friday, December 6, 2013 at 2:05 pm, Same address as above.

FACILITY CONSTRUCTION

Facility Construction Specification Revisions:

REVIEW: All Specification Sections have been reviewed for work progress.

ADD: NEC Energy Audit dated October 4, 2013

Facility Construction Drawings Included:

NONE

Facility Construction Drawing Revisions:

ADD: Structural information has been added in a memo dated September 18, 2013

Specification Section 02 4100 - Demolition

This entire section should be reviewed for completeness
ADD: Demo mudroom floor

Specification Section 02 8200 - Asbestos Remediation

This entire section should be reviewed for compliance

Specification Section 02 8313 - Lead Hazard Control Activities

This entire section should be reviewed for compliance

Specification Section 03 0100 Maintenance of Concrete

As called for in the current specifications:

3.03 LOCATIONS

- A. Basement Walls
- B. Basement Floor

Work to Date:

This work has not been completed



Condition of Basement Floor and Walls

Specification Section 03 0100 Maintenance of Concrete



Condition of Basement Floor and Walls

Specification Section 03 3000 Cast-in-Place Concrete

As called for in the current specifications:

2.01 FORMWORK**C. Footings**

1. 10" thick x 20" wide, continuous.
 - a. Detached garage frost footing.
 - b. Step frost footings at top and bottom of steps.
2. 8" dia. x 5'-0" deep piers at fence and handrails.

D. Steps

1. 6" risers and 12" treads. Provide number of treads and risers required to conform to existing grades.
2. Provide 6" minimum slab thickness, perpendicular to the slope, from bottom of riser to underside of slab.
3. Provide 8" thick stringer from transition of earth retaining wall to top of steps, both sides.
 - a. Structurally integrate with earth retaining wall and steps. b. Provide 3/4" chamfered top edges, flush with each nosing edge.

Work to Date:**C. Footings**

1. 10" thick x 20" wide, continuous.
 - a. Detached garage frost footing. - existing garage slab to be removed and replaced
 - b. Step frost footings at top and bottom of steps. - verify, probably not done
2. 8" dia. x 5'-0" deep piers at fence and handrails. - not started

D. Steps - not done

Specification Section 03 3000 Cast-in-Place Concrete



Garage slab to be removed



Work not completed at front or rear stairs

Specification Section 04 0100 - Maintenance of Masonry

As called for in the current specifications:

2.04 LOCATIONS

A. Interior and exterior foundation walls

Work to Date:

This work has not been completed:



Typical Basement conditions

Specification Section 04 2300 - Glass Unit Masonry

As called for in the current specifications:

3.02 LOCATIONS

A. Basement windows with vents; replace All. (3)

Work to Date:

This work has not been completed:



Existing Basement windows

Specification Section 05 7300 - Decorative Metal Railings

As called for in the current specifications:

3.02 LOCATIONS

- A. Front steps; from sidewalk, anchored to concrete steps
- B. Steps to garage

Work to Date:

- A. Front steps; anchored to concrete steps - **work not started**
- B. Steps to garage - **work not started**

Specification Section 06 1000 - Rough Carpentry

As called for in the current specifications:

3.04 LOCATIONS

- A. Construct new two car garage as per attached plan. **Position entry door and window to face rear yard.** Coordinate service door location with new concrete walks.
- B. Underlayment: secure to kitchen and mudroom floor for resilient flooring installation as per manufacturer.
- C. Frame all partition walls and closets as per plan.
- D. Front Porch, treated framing lumber; cedar deck, etc. according to drawing A2.
- E. Provide stud framing as per plans, include solid backing for closet hardware and bath accessories.
- F. Provide framing for Closet Maid Pantry System and doors.
- G. Jack and level first floor at NW part of house. Work to be performed by a contractor experienced in jacking and leveling.
- H. Provide beam under floor at NW corner of house as per City Inspection Report
- I. Plinth Blocks (see 033000) and Wood Posts in Basement: Provide temporary shoring and bracing. Set new precast plinth block on sound concrete slab or footing, directly under post(s). Provide shims to maintain post at proper bearing height.
- J. Appropriate supports and hand railings to meet code requirements. Locate at Back and basement stair.
- K. Provide continuous beveled cedar shims at all new window installations.

Work to Date:

- A. New Garage- **not started**
- B. Underlayment - **verify the work**
- C. Frame partition walls - **verify the work**
- D. Front porch - **not started**
- E. Stud framing per plan - **verify the work**
- F. Closet pantry framing - **completed**
- G. Jack and level first floor - **not done**
- H. Provide new beam - **not done**
- I. Plinth blocks - **not done**
- J. Appropriate supports - **verify work**
- K. Continuous beveled cedar shims - **verify work**

ADD: Mudroom: pull up floor, level ground below, cover ground with 6 mil poly, seal closed cell foam insulation to poly, new rim joist.

Note: Also see recommendations from Bunkers and Associates dated September 18, 2013 attached to this Addendum

Specification Section 06 1000 - Rough Carpentry



Existing Front Porch



Garage not built

Specification Section 06 2000 - Finish Carpentry

As called for in the current specifications:

3.02 LOCATIONS

- A. All new trim throughout; trim will be new pine #2 or better (Plan A5 has examples).
- B. New hardwood stair treads to the second floor at back stair.
- C. Front porch as per plan A2.
- D. Wainscoting and cap at stair to second floor (match original, change height to 4')
- E. New pre-primed hardwood bench at front entry as per plan A7.
- F. New bench and storage at mudroom as per plan A7.

Work to Date:

- A. All new trim throughout; trim will be new pine #2 or better (Plan A5 has examples) - **verify work**
- B. New hardwood stair treads to the second floor at back stair - **remove carpet and install hardwood treads**
- C. Front porch as per plan A2 - **not started**
- D. Wainscoting and cap at stair to second floor (match original, change height to 4') - **this work not done**
- E. New pre-primed hardwood bench at front entry as per plan A7 - **not done**
- F. New bench and storage at mudroom as per plan A7 - **not done**

Specification Section 07 2119 - Foamed-In-Place Insulation

As called for in the current specifications:

3.02 LOCATIONS

- A. Insulate and air seal rim joist cavities to an r-value of R-19
- B. Insulate and air seal all open walls and second floor ceilings to R-19

Work to Date:

This work needs to be reviewed and verified

ADD: See Attached NEC Energy Audit Recommendations

Specification Section 07 2126 - Blown Insulation

As called for in the current specifications:

3.02 LOCATIONS

- A. ATTIC: Total r-value: R-50 (about 36" with foamed in place in ceiling) according to NEC requirements.
- B. WALLS, SLANTS, ABOVE BAY WINDOWS: Where walls and roofs are unopened, externally dense pack insulation to R-19 if possible or 3.5 lbs.per cubic foot per cavity.
- C. MUD ROOM WALLS AND ATTIC: R19 and R50 respectively

ADD

- D. See additional locations such as knee walls, slants, etc. as mentioned in the NEC Specifications
- E. See attached NEC Energy Audit Recommendations

Work to Date:

This work needs to be reviewed and verified

Specification Section 07 2500 - Weather Barriers

As called for in the current specifications:

3.02 LOCATIONS

- A. Provide weather barrier systems at exterior walls. System to include wrapping and flashing at all window and door openings.

Work to Date:

This work needs to be reviewed and verified

ADD

- C. See attached NEC Energy Audit Recommendations

Specification Section 07 2700 - Air Barrier System (Sealing of Bypasses)

As called for in the current specifications:

3.02 LOCATIONS

- A. Exterior and Interior throughout, including attic

Work to Date:

This work needs to be reviewed and verified

ADD

- B. See attached NEC Energy Audit Recommendations

Specification Section 07 3113 - Asphalt Shingles

As called for in the current specifications:

3.02 LOCATIONS

- A. Replace all sloped shingle roofing on main building and new roofing on new garage. Include roof vents to code and water shield and pre-finished metal drip edge.
- B. Provide cost per sq. ft. of sheathing to be replaced as required.

Work to Date:

This work needs to be reviewed and verified

- A. House - no drip edge, roof vent is missing, and no ventilated soffits



Specification Section 07 4646 - Fiber Cement Siding

As called for in the current specifications:

3.02 LOCATIONS

- A. House (Siding Material Pre-purchased)
- B. House
 - 1. Window and Door Trim
 - 2. Soffit and Fascia (retain decorative corbel at west bay window)
- C. Garage
 - 1. Siding, Trim, Soffit, Facia

Work to Date:

This work needs to be reviewed and verified

- B. House - perimeter detailing at foundation wall to be reviewed, bottom trim board is missing in places, siding at porch connection will need to be revised, and there is missing siding in various places
- C. New Garage - not yet started

Note: Pull 10% siding off various points and check condition of sheathing and weather barrier. Remove and reinstall any uneven siding and trim.



Missing bottom trim and siding revision for porch connection

Specification Section 07 4646 - Fiber Cement Siding



Missing siding



Missing siding

Specification Section 07 7123 - Manufactured Gutters and Downspouts

As called for in the current specifications:

3.02 LOCATIONS

- A. Replace gutters and downspouts at house roof. See Site and Landscape plans for locations.

Work to Date:

Gutters and downspouts have not been installed.



Typical roof eave

Specification Section 08 1100 - Exterior Insulated Metal Doors and Frames

As called for in the current specifications:

3.05 LOCATIONS

- A. Front Entrance - Storm
- B. Rear Entrance - Storm
- C. Garage Service door

Work to Date:

- A. Front Entrance - **not completed.**
- B. Rear Entrance - **not completed.**
- C. Garage Service door - **not completed.**

Specification Section 08 1429 - Wood Doors

As called for in the current specifications:

3.03 LOCATIONS

- A. All interior doors
- B. Folding door at top of basement stair
- C. Swinging double doors at living to dining room
- D. French door as per plan
- E. Pantry
- F. Front Hall Closet double door
- G. SEE DRAWINGS for locations, sizes and swing. A3, A5, A7.

Work to Date:

- A. All interior doors - **no doors installed on second floor**
- B. Folding door at top of basement stair - **not installed**
- C. Swinging double doors at living to dining room - **installed**
- D. French door as per plan - **installed**
- E. Pantry - **installed**
- F. Front Hall Closet double door - **installed**
- G. SEE DRAWINGS for locations, sizes and swing. A3, A5, A7.

NOTE: Verify that all interior wood doors are on site, since most are not installed

Specification Section 08 1613- Fiberglass Doors

As called for in the current specifications:

2.01 DOOR AND FRAME ASSEMBLIES - ALL ENERGY STAR RATED

- A. Front Door
 - 1. Product: Therma-Tru Smooth Star two panel 3/4 light with tempered and double -paned low e clear glass
- B. Kitchen and Mudroom Doors (2)
 - 1. Product: Therma-Tru Smooth Star two panel 3/4 light with tempered and double -paned low e clear glass

Work to Date:

- A. Front door - **installed.**
- B. Kitchen and Mudroom Doors - **The installed back door is not the specified door, remove and replace. The door leading to the back porch from the kitchen is to be the same as the entry door to the back porch/ mudroom. This is currently a full 4 panel wood door and not what is specified. The door specification for both the back door and between the kitchen and porch is to be a two panel 3/4 light.**

Note: Install specified hardware.

Specification Section 08 3323 - Overhead Garage Doors

As called for in the current specifications:

2.03 LOCATIONS

- A. Provide overhead garage door and electric opener at New Garage

Work to Date:

- A. Provide overhead garage door and electric opener at New Garage - **work not started**

Specification Section 08 5213 - Metal-Clad Wood Windows

As called for in the current specifications:

1.01 LOCATIONS

- A. Remove all storm windows, window sashes, and window frames. Completely remove small basement windows and frames back to masonry openings.
- B. Replace all windows with style and operation type to match existing. Window installation to include flexible rubberized flashing at sill, rubberized straight flashing at jamb and head,(07 2500) and pre-finished metal flashing at head (07 6200). Paint interior to match existing trim and casing.
- C. Bow window in dining room to be venting picture window.
- D. One window per bedroom must meet local egress requirements. Provide center horizontal muntin to match double hung.

Work to Date:

This work needs to be reviewed and verified

- A. Remove all storm windows, window sashes, and window frames - **mostly completed**
Completely remove small basement windows and frames back to masonry openings - **not done**
- B. Replace all windows with style and operation type to match existing. Window installation to include flexible rubberized flashing at sill, rubberized straight flashing at jamb and head,(07 2500) and pre-finished metal flashing at head (07 6200). Paint interior to match existing trim and casing - **verify**
- C. Bow window in dining room to be venting picture window - **verify**
- D. One window per bedroom must meet local egress requirements. Provide center horizontal muntin to match double hung - **completed**

Note:

- 1. No screens on second floor windows.
- 2. Missing window grilles in Bedroom windows
- 3. Previous Change Order to Marvin Integrity

Specification Section 09 0160 - Hardwood Floor Restoration

As called for in the current specifications:

3.02 LOCATIONS

- A. First Floor:
 - 1. Living Room
 - 2. Dining Room
 - 3. Front Foyer
- B. Second Floor
 - 1. Throughout
 - 2. Except Bathroom

Work to Date:

Floors are sanded but not finished. This work should be reviewed and suggestions may on how to proceed. Miscellaneous repairs are needed. Stair treads and risers need to be installed for both the Basement stairs and the stairs to the second floor. **Carpet has be put down on the stairs to second floor, and this should be removed.**

Note:: Use Kitchen flooring to patch and repair other wood flooring.



Floor repair - various locations

Specification Section 09 0160 - Hardwood Floor Restoration



Living Room Floor

Specification Section 09 2116 - Gypsum Board Installation

As called for in the current specifications:

3.03 LOCATIONS

- A. As required by suggested demolition, including but not limited to:
 - 1. All interior walls and ceilings

Work to Date:

Most of the work is completed with the exception of some final sanding.



Specification Section 09 3000 - Tiling

As called for in the current specifications:

3.06 LOCATIONS

- A. Bathtub Tile Surround
 - 1. Second Floor Bath
- B. Bathroom Tile Floor
 - 1. First Floor Bath
 - 2. Second Floor Bath

Work to Date:

- A. Bathtub Tile Surround
 - 1. Second Floor Bath - wall tile mostly complete, finish detailing needed
- B. Bathroom Tile Floor
 - 1. First Floor Bath - floor tiling mostly complete
 - 2. Second Floor Bath - mostly complete



First Floor floor tiling

Specification Section 09 3000 - Tiling



Second Floor tile surround



Second Floor floor tile

Specification Section 09 5060 - Resilient Flooring

As called for in the current specifications:

3.03 LOCATIONS

- A. Kitchen to bottom of Second Floor Stair
- B. Mud Room
- C. Space under Second Floor Stair

Work to Date:

- A. Kitchen to bottom of Second Floor Stair - **not done**
- B. Mud Room - **not done**
- C. Space under Second Floor Stair - **not done**

Specification Section 09 9000 - Painting and Coating

As called for in the current specifications:

3.03 LOCATIONS**A. Throughout**

1. Walls and Ceilings: Sherwin Williams Low VOC
 - a. Wall Color: to be determined by Construction Manager - eggshell finish
 - b. Ceiling Color: Ceiling White - flat finish
2. Interior Trim and Doors, including pantry cupboard doors Interior of fiber glass doors: Semi-gloss Sherwin Williams Low VOC
 - a. Trim Color: to be determined by Construction Manager
3. Stair to 2nd floor: Alkyd Floor enamel
 - a. Color to be determined

B. Kitchen and Bath

1. Walls and Ceilings: Eggshell Sherwin Williams Low VOC
 - a. Wall Color: to be determined by Construction Manager
 - b. Ceiling Color: Ceiling white
 - c. Trim: to match cabinetry

C. Basement:

1. Stairway to include treads and risers.
2. Color: To be determined

D. Exterior:

1. Paint all exterior siding, trim, soffit and fascia, entry doors and frames.
2. Doors: Semi-gloss enamel acrylic as per manufacturer.
3. Front Porch, Mudroom Floors, Stair to 2nd floor - Alkyd floor enamel
 - a. Color: to be determined by Construction Manager.

Work to Date:

We believe the interior colors match 653 Cook specified colors. Review and verify this Section.

Note: 1. Interior and exterior colors to remain as originally chosen for 655 Cook. Repaint areas that do not match original selected colors.

2. Mudroom Storage and Bench; High-gloss Sherwin-Williams Low VOC , see “Colors and Selections.”

Specification Section 09 9723 - Concrete and Masonry Coatings

As called for in the current specifications:

3.03 LOCATIONS

- A. Basement Foundation Walls - DryLock by UGL in white, or like product
- B. Basement Floor - concrete floor grey

Work to Date:

This work has not been completed.



Existing condition of Basement

Specification Section 10 5623 - Closet Storage Shelving

As called for in the current specifications:

3.02 LOCATIONS

A. Closets Throughout

Work to Date:

No work has been done

Specification Section 10 7446 - Window Wells

As called for in the current specifications:

3.02 LOCATIONS

A. All basement windows that require a window well by code.

Work to Date:

No work has been done

Specification Section 11 3100 - HRA Residential Appliances

As called for in the current specifications:

2.02 LOCATIONS

- A. Basement
- B. Kitchen

Work to Date:

Remove and reinstall as needed.

Specification Section 12 1110 - HRA Mail Box and House Numbers

As called for in the current specifications:

3.02 LOCATIONS

- A. House numbers and mail box at Front Entrance
- B. One House number at Garage Overhead Entrance

Work to Date:

- A. House numbers and mail box at Front Entrance - **note existing conditions**
- B. One House number at Garage Overhead Entrance - **garage not built**

Specification Section 12 1111 - Bathroom Furnishings

As called for in the current specifications:

3.02 LOCATIONS

- A. First Floor powder room
- B. Second Floor bathroom

Work to Date:

- A. First Floor powder room - **not installed**
- B. Second Floor bathroom - **not installed**



First Floor powder room

Specification Section 12 3530 - Residential Casework

As called for in the current specifications:

3.02 LOCATIONS

- A. Provide base and wall cabinets and plastic laminate countertops at Kitchen. Countertop installation to include side and back splashes.
- B. Provide bath vanity cabinets at 2nd floor bath, including integral sink.
- C. Provide cabinet over toilet at second floor to match.
- D. Provide Closet Maid pantry cupboard with light at kitchen.
 - 1. See attached for Closet Maid pantry system shopping list.

Work to Date:

- A. Provide base and wall cabinets and plastic laminate countertops at Kitchen. Countertop installation to include side and back splashes - **mostly completed**
- B. Provide bath vanity cabinets at 2nd floor bath, including integral sink - **cabinets on-site, no sink or tops**
- C. Provide cabinet over toilet at second floor to match - **not on-site**
- D. Provide Closet Maid pantry cupboard with light at kitchen - **not completed**
 - 1. See attached for Closet Maid pantry system shopping list.



Second Floor Bathroom cabinets

Specification Section 12 3530 - Residential Casework



Existing Kitchen installation



Existing Kitchen installation

Specification Section 22 3000 - Plumbing Equipment

This entire section should be reviewed for compliance

Specification Section 22 4000 - Plumbing Fixtures and Piping

This entire section should be reviewed for compliance

Specification Section 23 0000 - Residential Ventilation

This entire section should be added to the Addendum

Specification Section 23 5214 - Gas-Fired Ultra Efficient Boiler

This entire section should be reviewed for compliance

Specification Section 23 6210 - Multi Zone Ductless Mini Split AC

This entire section should be reviewed for compliance

Specification Section 26 0001 - HRA Residential Wiring

This entire section should be reviewed for compliance

Specification Section 26 5100 - HRA Lighting

This entire section should be reviewed for compliance

Specification Section 28 1600 - Intrusion Detection

This work has been completed

Specification Section 31 2200 - Grading

As called for in the current specifications:

2.03 LOCATIONS

A. See Landscape Plan

1. This plan does include a raingarden

Work to Date:

Grading is not completed



Existing rear yard condition

Specification Section 32 1313 - Concrete Paving

As called for in the current specifications:

3.04 LOCATIONS

- A. See Landscape and Site Plans
- B. Include 10" NDS Catch Basin installed in walkway as per Landscape Plan
- C. Install 4" Schedule 40 PVC pipe under concrete walkway connecting to catch basin as per Plan.

Work to Date:

- A. See Landscape and Site Plans - **not done**
- B. Include 10" NDS Catch Basin installed in walkway as per Landscape Plan - **not installed**
- C. Install 4" Schedule 40 PVC pipe under concrete walkway connecting to catch basin as per Plan - **not installed**



Front entry sidewalk, missing catch basin

Specification Section 32 1313 - Concrete Paving



Existing front step framing



Existing rear step framing

Specification Section 32 3113 - Chain Link Fences and Gates

As called for in the current specifications:

3.02 LOCATIONS

- A. Top of retaining wall: east lot line

Work to Date:

- A. Top of retaining wall: east lot line - **not installed**



Existing east retaining wall

Specification Section 32 3223 - Segmental Retaining Walls

As called for in the current specifications:

3.02 LOCATIONS

- A. **Note - does not call out locations or refer to Landscape Plans**

Work to Date:

- A. **Partially installed - all walls will need to be reinstalled to meet manufacturers instructions.**



Partially installed front retaining wall

Specification Section 32 3223 - Segmental Retaining Walls



Rear retaining wall



East retaining wall

Specification Section 32 9223 - Sodding

As called for in the current specifications:

3.03 LOCATIONS

- A. See Landscape Plan
- B. Site Work, as needed. (no bare soil permitted)

Work to Date:

No work has been started

Specification Section 32 9300 - Plants

As called for in the current specifications:

3.04 LOCATIONS

- A. As indicated by Landscape Plan

Work to Date:

No work has been started

HOME ENERGY AUDIT Infrared Report



Inspection Date: 10/4/13
 Client Name: NeDA
 Building Address: 655 Cook Ave E, St Paul
 Thermographer: Terry Cagle-Kemp, 651-221-4462

An inspection, visual and infrared (with a blower door depressurizing the house) was conducted on October 4 to try to determine the quality of the insulation and air sealing work that was done at 655 Cook Ave E. The blower door test reading was 3408 CFM50. Although this is high, it is mostly due to leaky windows in the basement that have not replaced and a missing attic access panel in ceiling of the mud room. The temperature difference between inside and outside (10° F) at the time of the inspection was not great enough to conclusively determine the quality of the wall insulation. However, what was seen with the infrared scanner plus some visual clues would indicate that walls are sufficiently insulated. There is no access into the peak attic which prevented the determination of the level of insulation. The infrared scan appears to indicate a couple of insulation voids. It is recommended that an access opening be cut so that a visual inspection be conducted. The basement rim joist is sufficiently insulated and air sealed.

There is a back porch that, according to the floor plans in the kitchen, is being converted to a mudroom. The exterior walls have been insulated and finished and there are new windows. However, neither the attic above the mudroom nor the floor below has been insulated yet. An exterior inspection of the mudroom indicates that it is sitting on a concrete footing. Unfortunately, the top of the footing is almost level with the ground which would make insulating the floor extremely difficult. For these reasons, my recommendation would be to leave the mudroom as an unheated space, not insulate the ceiling or floor and install a window in the rough opening between the kitchen and the mudroom.

ABOUT INFARED IMAGES

The infrared (IR) images show what the surface temperatures of wall and ceiling areas are relative to surrounding areas. The darker shades represent colder areas and indicate framing and/or insulation voids or cold air coming in from outside. Following are infrared images next to standard digital photos of the same areas. Darker shades indicate cooler surfaces while lighter shades indicate warmer surfaces.

DIGITAL PHOTOS and INFARED IMAGES

COMMENTS



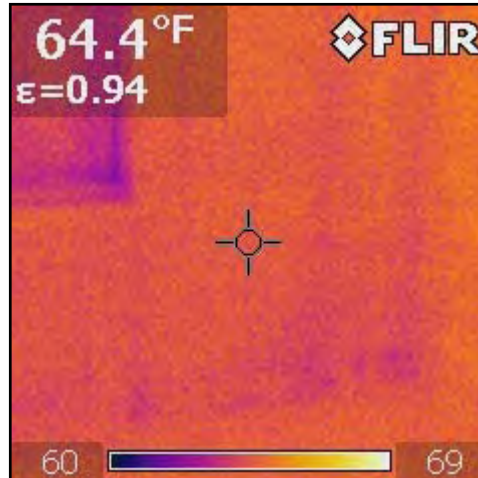
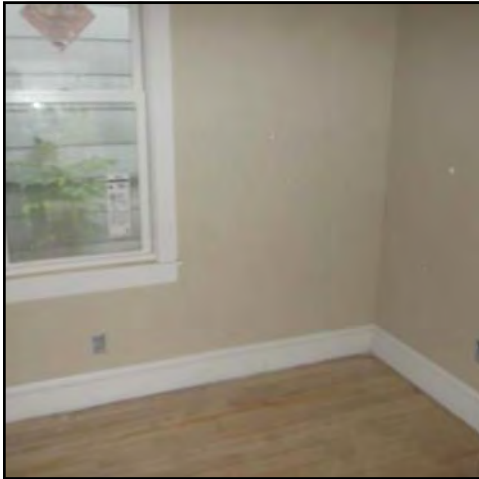
These two images show that the walls have been insulated with sprayed foam insulation.

HOME ENERGY AUDIT Infrared Report

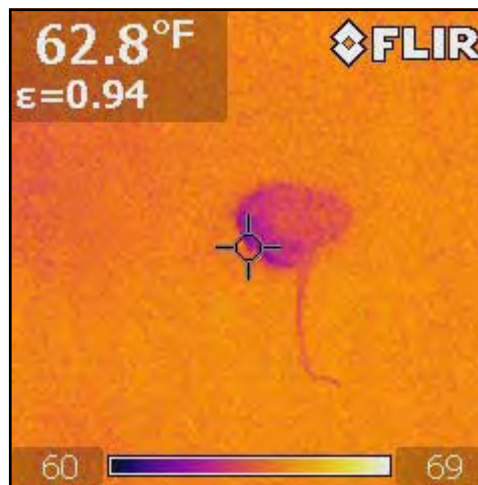
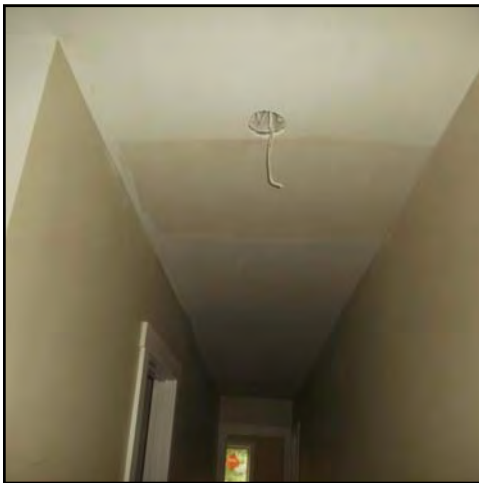


DIGITAL PHOTOS and INFARED IMAGES

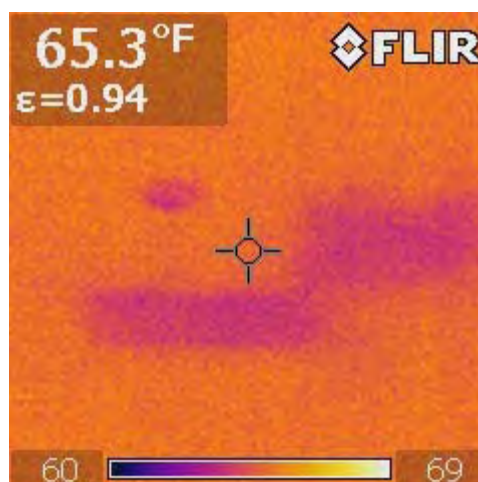
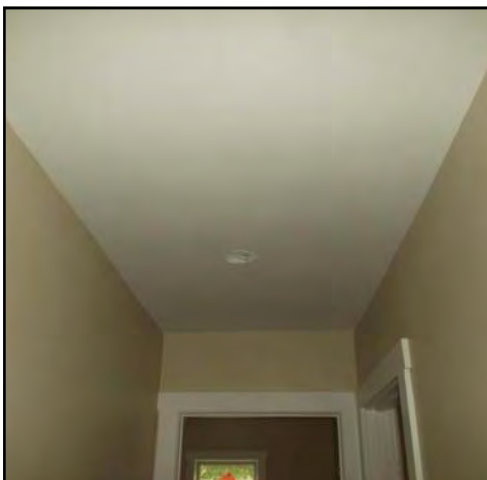
COMMENTS



This image is representative of all the exterior walls. While the temperature differential was too small to conclusively say that the walls are fully insulated, this image does show that the studs are cooler than the cavities. This, plus the exposed part of the wall cavities seen on the first two images leads me to conclude that all the walls are insulated.



This image of the upstairs hallway shows some air infiltration around the electrical box during the blower door test. This is representative of all the ceiling electrical boxes and it is recommended that they be caulked before the ceiling fixtures are installed.



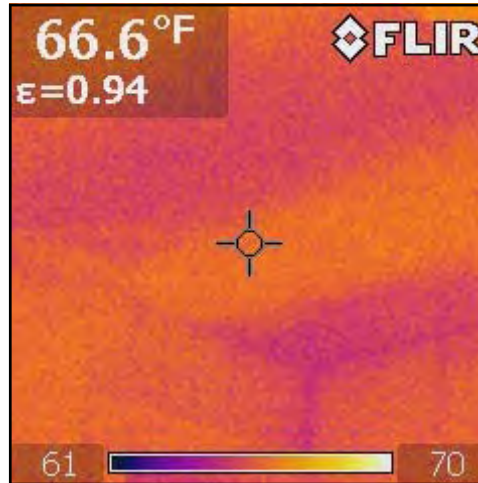
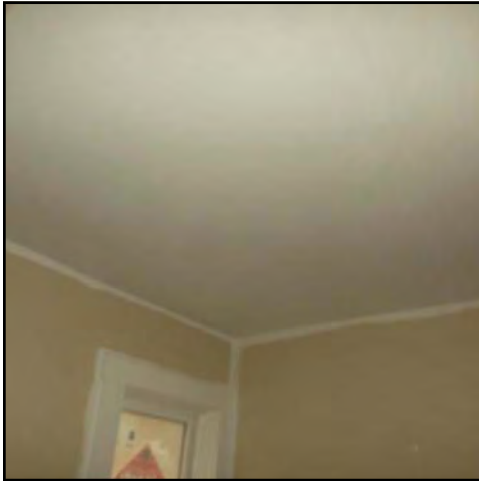
This and the next two infrared images of the second floor hallway and bathroom appear to indicate insulation voids in the attic. There is no access to the attic so these insulation voids could not be verified. The recommendation would be to cut a hole in each area to determine if these areas are small voids or bare areas of the attic floor.

HOME ENERGY AUDIT Infrared Report

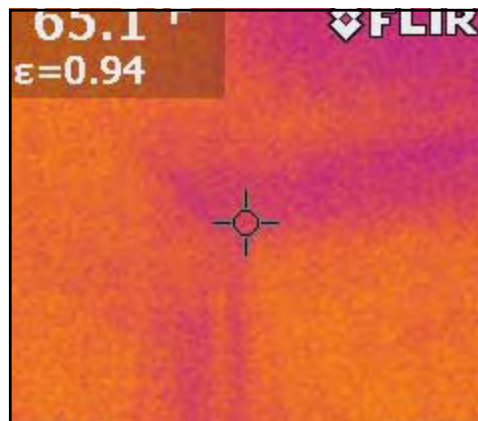
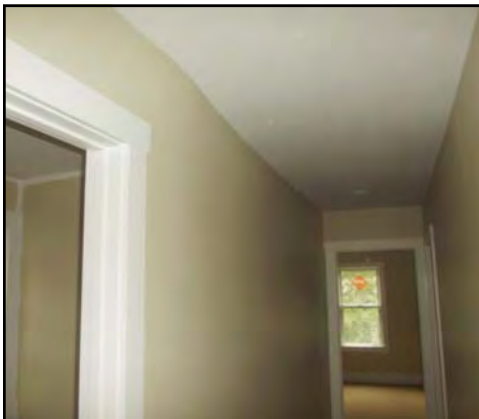


DIGITAL PHOTOS and INFARED IMAGES

COMMENTS



Second floor bathroom.



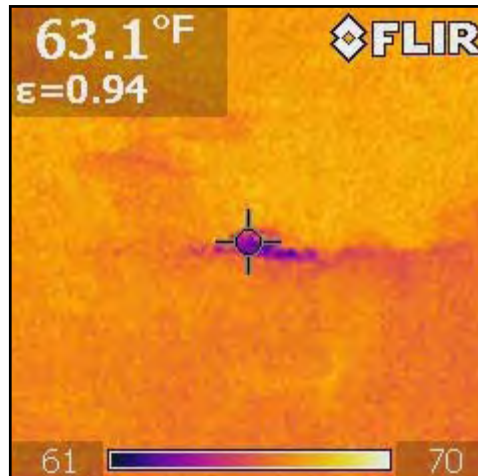
Hallway outside of bathroom.

HOME ENERGY AUDIT Infrared Report

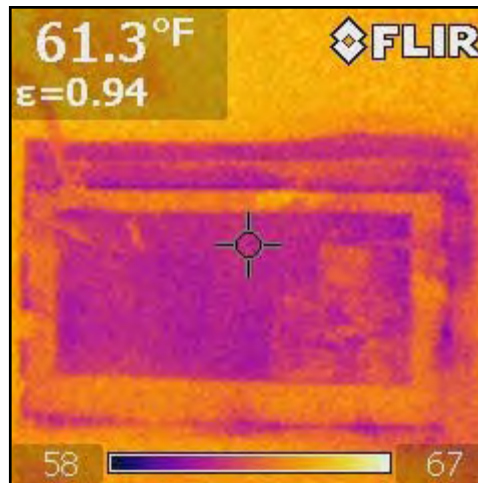


DIGITAL PHOTOS and INFARED IMAGES

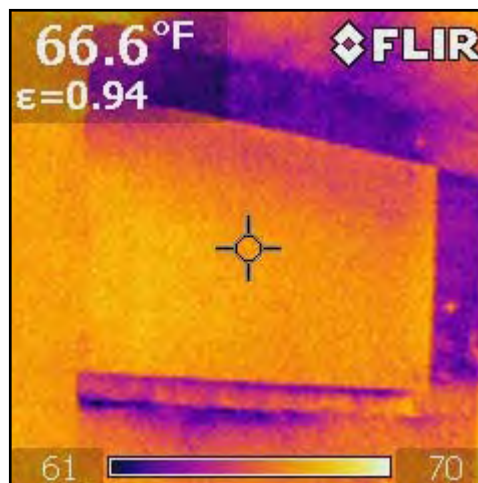
COMMENTS



Air leakage in rim joist where the spray foam insulation has shrunk



None of the basement windows have been replaced yet and are very leaky.



HOME ENERGY AUDIT Infrared Report



DIGITAL PHOTOS and INFRARED IMAGES

COMMENTS



Mudroom with opening in wall where presumably a window will be installed and a missing access panel in ceiling.



Mudroom floor that is not insulated.



Exterior door of mudroom. Wood at base of wall looks like it needs to be repaired or replaced.



Date: September 18, 2013

To: Neighborhood Development Alliance
Wabasha Center, 481 South Wabasha St.
St. Paul, MN 55107

Attn: Gail Merriam

From: Eric Bunkers

Project: Residence
655 E. Cook Ave.
St. Paul, MN

Proj. No: 13223

Subject: Addendum #2, Structural Items to Complete

Dear Gail:

As requested, we met you at the above referenced project to visually observe the existing conditions and determine which structural items are remaining at the project. Our observations were visual only and we did not remove any finishes. Our observations are intended to indicate which structural items were not completed by the contractor in accordance with the specifications. Here is a list of our findings:

1. We recommend the stack block retaining walls on the property be rebuilt with the proper tie-back system per the manufacturer's recommendations.
2. We recommend the existing new garage slab be removed because of the large cracking and settlements and steep pitch at the alley. The sub-base should be well compacted granular material to frost depth per IRC requirements for thickened edge garage buildings.
3. Installation of front porch framing and foundations are incomplete.
4. There is missing masonry foundation near the SW corner of the side porch. Clean and patch the holes with masonry or concrete as required. Some subfloor may have to be removed for access and full observation of this area. Replace any rotted joists and subfloor as required.
5. Install 12"x12" precast plinth block at existing post bases onto sound basement slab.
6. Add 4x4 posts with 12"x12" precast plinth blocks at the bottom of the basement stairs to support the floor framing. Add joist hangers at the stair beams here.
7. Add 2x8 floor joists below subfloor at door hatch below kitchen in back basement area in SW corner. Add 2x4 knee wall on existing foundation wall here.
8. Block subfloor in kitchen near heat register.
9. Repair existing rim board, sheathing and sill plate at NE corner of building next to the stair well. Replace rotted material with treated material. Possibly jack up area without damaging structure above.
10. Add 3 – 7 1/4" LVL beams under living room walls below entry door, both sides of timber beam below. Bear LVL beams on timber beam and foundation walls with 3" bearing. Wrap ends of beams with tar paper at foundation walls. Possibly jack up floor sag without damaging structure.
11. Re-grade north yard and install gutters with long downspout extensions to help minimize water

infiltration into the foundation.

If you have any questions or concerns, please feel free to contact us.

Sincerely,

Bunkers and Associates, LLC



Eric M. Bunkers, P.E.
MN Reg. Num. 26490

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.



Eric M. Bunkers

Date: September 18, 2013 Reg. No. 26490